the

No. 3, $2

JOURNAL

of the Travellers' Aid Society

Asteroid Mining

TRAVELLER

Traveller is a game system intended for role-playing situations in the far future. It envisions certain standards for human behavior, for space travel, and for alien worlds. It details the basics of life and of endeavor. From that background, players assume the role of adventurer and set out into the universe in search of fame, glory, fortune, and power.

To begin, **Book 1** covers the details of persons, how they are defined and generated, and what forms of knowledge are at their command. It continues by covering combat with bare hands, laser guns, and everything in between.

Book 2 is concerned with starships and space travel. Securing passage on a starship, and encountering its costs and its comforts, gives everyone an idea of the pleasures and dangers of interstellar flight. Additional information covers how an individual may procure his own personal ship, how much it will cost to operate, and what it takes to crew it. Players may instead attempt to sign on as crew for working passage. More details cover space combat, commerce, and experience.

Book 3 indicates what kinds of worlds will be encountered, including the details of size, atmosphere, populace and government. Separate sections address the potential for animal encounters, patron encounters, and for psionics.

In essence, the **Traveller** Basic Set (Books 1, 2, and 3, boxed) provide a set of ground rules revealing how the universe operates. Players and referees are then free to venture in search of whatever they desire.

Traveller is a role-playing game. Although intended for use by a referee with from 2 to 5 players, any number can play, and solitaire play is extremely simple. Because it is a role-playing game, much of the action is cooperative in nature, rather than strictly competitive, and everyone has ample opportunity to participate and contribute.

Traveller — Science-Fiction Adventure in the Far Future. Boxed $11.98

Available from hobby and game shops, or direct from

Game Designers' Workshop
203 North Street, Normal, Illinois 61761

the JOURNAL of the Travellers' Aid Society

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Dates in this issue of the *Journal* are given in accordance with an arbitrary Imperial calendar of 365 days. The expression of date consists of a three-digit day number (showing the current day of the year), followed by a dash and a four-digit year number (showing the current year since the founding of the Imperium).

The date of this issue is 001-1106; New Year's Day of the 1106th year of the Imperium. All dates given in this issue correspond to this dating.

The Journal of the Travellers' Aid Society is a science-fiction gaming magazine dedicated to **Traveller,** GDW's role-playing game set in the far future.

Editor— Loren K. Wiseman
Spiritual Advisor— Marc W. Miller
Publisher— Game Designers' Workshop
Artists in this issue— Lydia Moon, cover. Bill Rotsler, 16. Bob Barger, 23. Charles Williams, 24. Gary Johnson, 26. Dick Hentz, 27. Tom Smith, 28-29.

The Journal of the Travellers' Aid Society is copyright 1979 by **Game Designers' Workshop.** Printed in the U. S. A. All Rights Reserved. ISSN: 0193-3124. All editorial and general mail should be sent to *The Journal,* Box 432, Normal, Illinois 61761.

The Journal of the Travellers' Aid Society is published quarterly with an individual issue price of $2. One year subscriptions are $7 in the United States and Canada. Foreign subscriptions (outside the U.S.A. or Canada, and not to FPO or APO addresses) are $14 per year, which includes air mail postage. Please make all payments in U. S. funds drawn on a U. S. bank. Advertisers should inquire for an advertising rate card.

Submissions: We welcome articles and illustrations for the *Journal.* Please inquire before submitting manuscripts; we will send a style and want sheet.

From the Management

The most recent GDW game flyer had a passing mention of the current Traveller Project— Azhanti High Lightning. The inquiries on this project prompt this preview of the project.

Azhanti High Lightning is a large (better than 20,000 tons) starship in the service of the Imperium. Originally produced with a spinal particle accelerator, the class of ships has been retired, and recently quite a few have returned to Imperial service after a refit with meson guns. In addition, these ships mount three squadrons of fighters, and extensive secondary armament. Other ships in the class include the Bard Endeavour and the Regional Frenzy.

The project is a boxed game set aboard the Azhanti High Lightning. Components include fourteen game maps (deck plans) each measuring 14 by 17, several sheets of counters (similar to the Snapshot counters), and a booklet (possibly two booklets) with interior descriptions, scenarios, and other data.

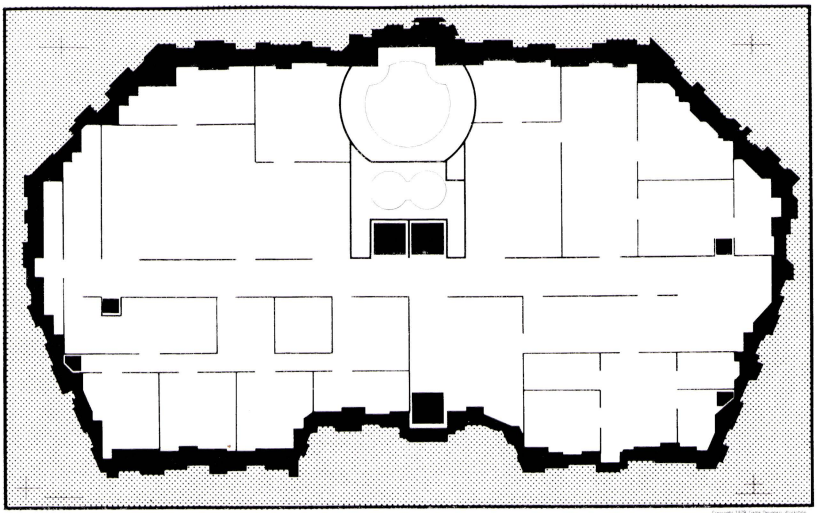
At present the ship is being designed, with the various decks being laid out and tested. Because many decks will be identical, it is possible to cover the sixty or so decks with the fourteen sheets of plans available in the package. Just around the corner is preparation of the counters, which are planned to include military personnel, crew members, and warbots based (somewhat) on the continuing ref's notes in the Journal.

Because the Snapshot rules are proving somewhat cumbersome, the project is evaluating a set of simplified rules designed by Frank Chadwick. Of course, Snapshot rules should prove entirely usable with the deck plans, which use the standard half-inch squares.

Envisioned as the major thrust of the game are a series of scenarios aboard the starship as it lies damaged and derelict in a decaying orbit. Operations could encompass salvage, rescue, or emergency repair, all while control of the ship remains uncertain. Other possibilities being investigated include a mutiny scenario (perhaps two— one with the mutiny, and another as the officers try to take the ship back), a brig escape scenario, a boarding action situation, and even a disaster situation. Certainly the ship will also be suited to Traveller adventures run by referees.

The illo on the next page shows one of our current decks in the ship (reduced to 20% of actual size).

Azhanti High Lightning is planned for release next July, at Origins, '80. Look for it.



A Quarters Deck Aboard the Azhanti High Lightning.

Traveller is available overseas though GDW distributors in the UK and Australia.

In the United Kingdom: *Traveller* (and its additional booklets, adventures, and supplements) is printed under license from GDW in the UK by **Games Workshop,** 1 Dalling Rd, Hammersmith, London, W6. This British edition, printed in the UK, means lower prices because no customs duties are involved.

In Australia: *Traveller* is imported and distributed by **Jedko Games,** 18 Fonceca Street, Mordialloc, Vic, Australia.

Upcoming Traveller Projects from GDW: The following projects are currently in the works at GDW for publication in the first half of 1980.

1. Azhanti High Lightning-- as indicated on page 2. Design staff includes Marc W. Miller and Frank Chadwick.

2. Supplement 5, 76 Patrons— a compilation of scenarios based on the patron encounter table in book 3. Designer: Loren K. Wiseman.

3. Double Adventure 1, Annic Nova/Shadows— two adventures printed back to back like an old Ace double novel. **Annic Nova** first appeared in Journal No. 1. **Shadows** is totally new, and will be used as a tournament situation (at WinterWar, Urbana, January, 1980) before publication. Designer: Marc W. Miller.

4. Adventure 2, Research Station Gamma— a single adventure (much like **The Kinunir** in format) dealing with an Imperial Research Station somewhere near Regina. Contents will inlcude deck plans, rumors, library data, situations. Designer: Marc W. Miller.

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JUST DETECTED

Miniatures:

Martian Metals will be releasing Traveller miniatures (15mm) sometime in early 1980.

Games:

Starfleet Battles, Designers' edition

New boxed version of this ship-to-ship game, set in the Star Trek Mythos.

216 counters, 21 x 22 map, expanded rules and charts in a box. $12.95.

Design - Steve Cole

Publisher - Task Force Games, 405 South Crockett, Amarillo, TX 79129.

Starfire

Fleet combat in deep space. 10 scenarios and numerous options.

108 counters, 17 x 22 map, rules and charts in a polyvinyl bag. $4.95.

Design - Steve Cole

Publisher - Task Force Games, 405 South Crockett, Amarillo, TX 79129.

Asteroid Zero-Four

American and Soviet forces battle for control of the raw materials of the asteroid belt.

108 counters, 17 x 22 map, rules and charts in a polyvinyl bag. $4.95.

Design - Steve Cole

Publisher - Task Force Games, 405 South Crockett, Amarillo, TX 79129.

Dra'k'ne Station

A complete, prepackaged adventure for Traveller, detailing an alien artifact (a deserted research station on an asteroid) to be explored and exploited.

62 pages, with illustrations. $4.95.

Design - Bill Paley

Publisher - Judges Guild, 1165 North University, Decatur, IL 62526.

Books:

Barlowe's Guide to Extraterrestrials

112 pages of classic science fiction aliens, in full color, including Cinruss, Regul, Dirdir, Vegan and dozens of others all with brief histories and commentary. In addition the artist has included a 30 page portfolio of sketches, depicting numerous of the aliens in a variety of poses. A fantastic book, which everyone interested in SF aliens should see. $7.95.

Author - Wayne D. Barlowe and Ian Summers

Publisher - Workman Publishing Co, 1 West 39th St, New York, NY 10018.

Movies:

By the time you read this, *Star Trek: The Movie,* and *Black Hole* will have premiered nation-wide. The *Star Wars* sequel, *The Empire Strikes Back!* is due to open in the US in late May. The producers promise that this one will be as great an advance in the state of the special effects art as SW was. I've seen some stills and they may be right.

Coming up: Dune, Ridley Scott's (director of *Alien*) version of the Frank Herbert novel, is rumored to be in the final stages of production. TV producer/director/writer Phillip DeGuere has undertaken to film Arthur C. Clarke's first novel, *Childhood's End*, probably for television.

TRAVELLER NEWS SERVICE

REGINA/REGINA (0310 - A788899 - A) **Date: 201-1105**

¶ Last night a series of explosions ripped through Vehicle Assembly Building Nº 3 of the General Shipyards facility on Pixie. Both company and military investigators on the scene report that the damage was almost certainly the work of saboteurs.

¶ General Shipyard's Vehicle Assembly Building Nº 3 housed the main assembly line for the production of L-Hyd drop tanks. The L-Hyd drop tank project, undertaken in conjunction with the Tukera Line (of Vland/Vland), is expected to open up the Regina subsector to high capacity commercial access from the interior. A spokesperson for the company reported that the explosions probably set the project back by at least three months.

¶ Imperial Navy Commander Lobeck hault-Donesev, the naval system liaison officer on the L-Hyd project, announced that Naval counter-intelligence was exploring the possibility that the sabotage was the work of Ine Givar terrorists. Ine Givar activity in the Regina subsector has thus far been limited to scattered and ineffective stikes on Efate and Feri, but this incident "definitely bore their signature," he explained.

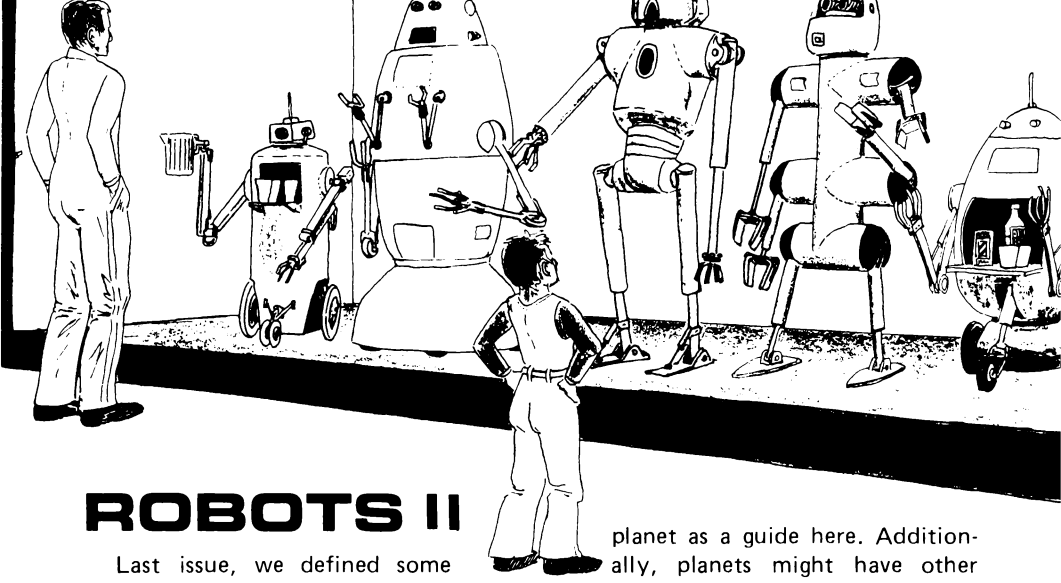
¶ General Shipyard press secretary Harcord Haveln, however, discounted any political motives for the sabotage. "There are commercial concerns in the subsector who place their own self-interest above that of the population as a whole," he said. When pressed for an explanation, he refused to elaborate.

¶ The public affairs officer of the Pixie office for Naval Counter-Intelligence refused an interview later in the day, but issued a press release disavowing any responsibility for the remarks of Commander hault-Donesev and stating unequivocally that NCI had no evidence whatsoever of Ine Givar activity on Efate, Feri, or Forboldn. Ω

REGINA/REGINA (0310 - A788899 - A) **Date:224-1105**

¶ General Shipyard s has reported 276 confirmed break-ins of its scrapyard at Regina during the last six months and is considering instituting a "take a number" system. Ω

Traveller News Service is another Imperium-wide benefit of membership in the Travellers' Aid Society.



ROBOTS II

Last issue, we defined some terms, and laid a groundwork for discussion. This issue, we will deal with the construction and purchase of non-player character robots. In future issues, we will outline some rules for the use of robots in a traveller campaign.

Specific details of the economic aspects of robots for a particular campaign must be determined by the referee to suit his or her own situation, but here are some suggestions. The minimum tech level at which a robot may be manufactured is 12, and therefore, robots may not be manufactured on planets with tech levels lower than that. As with all items, however, robots may be imported to planets where they cannot be manufactured. The increase in price would depend on individual circumstances. Also, it is possible that used or damaged robots might be available at reduced prices, and "hot", or stolen robots might be available.

Armed robots and warbots (military models) will naturally be subject to legal restrictions on most planets. The referee should use the law level of a particular planet as a guide here. Additionally, planets might have other restrictions on the use of robots. A planet might restrict importation out of a desire to protect local jobs, out of anti-mechanical paranoia, or for some obscure socialogical or religious reason.

CONSTRUCTION

If a player does not wish to purchase a standard model, and if he or she has access to a manufacturer or manufacturer's representative, a robot may be custom built to a player's specifications. The proceedure is similar to that for building a starship (see book 2). The player(s) decide what is needed, then run through the construction checklist (given below). This checklist is then presented to the manufacturer, who will produce a robot. The factory will require a down payment of 30%, with the balance payable on delivery. The actual price of the robot is determined by the sum of the cost of its components. Standard models and models which are produced in lots of 100 or more are granted a 25% discount off purchase price due to economies of scale. Other discounts maybe available, depending on circumstances.

ref's notes

Design Checklist

1. *Determine function of robot.*
2. *Select basic components.*
   a. *brain*
   b. *chassis*
   c. *locomotory equipment*
   d. *basic sensor package*
3. *Select Additional Components.*
4. *Select any special modifications.*
5. *select Power Plant*
   a. *determine power requirements.*
   b. *select proper power plant.*
6. *Determine final mass of components. and cost of unit, and revise as necessary.*
7. *List final characteristics and cost of robot.*

BASIC COMPONENTS

A robot requires a brain, a power plant, a frame or chassis to which the other components are attached, and which provides some protection to the delicate workings of the robot, a basic sensor package, and some means of moving from one place to another.

Brain: The brain is the most important component of a robot, and the most difficult to manufacture. A complex sponge matrix of semi-conducting pseudo-neural pathways, the brain is the center of the robots "intelligence". There are several models of brain, each progressively more complex and more compact, and each available at a different tech level. The mass, tech level of availability, cost, and power requirements of the types of brains are listed in the appropriate section of the brain table. Brains are very sensitive to shock, extremes of temperature, and excessive radiation. Certain robots come in two or more sections, in order to protect the brain from damage These robots have a "Master" section, which contains the brain, a power plant and one or more "slave" sections, controlled from the "master" by remote control.

Chassis: This is the framework to which all other components are attached. In addition, the chassis provides an outer covering which serves to provide protection from outside contaminants such as dust, and from prolonged exposure to hard vacuum conditions, but not from corrosive or insidious atmospheres. The chassis can be constructed to generally resemble a human being, (two arms, two legs, torso and head,) or can be made almost indistinguishable from a human, at great loss of flexibility and increased cost. This is covered later, in a section entitled Anthropromorphism. The chassis section of the components table lists the characteristics of the various types of chassis.

Basic Sensor Package: This includes auditory, visual, and olifactory sensors capable of performance comparable to the human senses. This package is required as a base for all other sensory aparatus.

Power Plant: This is a hydrogen/oxygen fuel-cell capable of thirty days continous operation before refueling is needed. Other types of power plant may be devised at the referee's option. The power requirements of a particular robot may be determined by totaling the power requirements of the individual components as listed on the components table.

Locomotion: Every robot, with rare exception, must be able to get from place to place under its own power. There are four basic types of locomotory apparatus in common use. These are wheels, which take up the least space, and are the most inexpensive, but have limited ability to traverse rough terrain; legs, which are very space consuming, but provide excellent rough terrain capability; tracks, a compromise between expense, speed, and rough terrain capability; and antigravity units,

which are compact, and enable the robot to cross any terrain with ease, but are extremely expensive. The mass, cost and power requirements of each type of locomotory apparatus for each type of chassis is given on the components table.

ADDITIONAL COMPONENTS

Players will, of course, wish to add additional components to tailor their robot to a specific function. What these components are and what they do is described briefly below.

Arms-

These are sensor or tool equipped extendable limbs, any number of which (within the mass limits) may be installed on a robot. No arm may carry components with total mass greater than it's rated capacity without damaging itself. The characteristics of all three arms are listed on the components table. There are three sizes.

Light Arm: The light arm is approximately one meter in length, and is usually tipped with a manipulatory device duplicating the human hand. This eliminates the need for a "Swiss army knife" contraption on the end of the arm, and permits the robot to use tools shaped for human hands.

Medium Arm: The medium arm may carry a "hand" similar to the one used above, or may be fitted with one of the other components listed below.

Heavy Arm: The heavy arm has the same general characteristics as the medium arm, but has a greater capacity.

Sensors-

Enhanced Night Vision: This apparatus permits the robot to see in all but the complete absence of light.

Passive IR: This unit permits the robot to see by detecting naturally present IR radiation. It does not project infrared.

Active IR: This unit acts as the passive unit, but emits IR radiation, like a searchlight. This unit has a greater range, but can be detected by other IR sensors very easily.

Active and Passive UV: These units act as the IR units mentioned above, but using ultraviolet rather than infrared radiation.

Subsonic Audio: This unit detects sounds too low in frequency for the human ear.

Ultra-sonic Audio: This unit detects sounds too high in frequency for the human ear.

Telescopic Visual: This unit enhances the robots vision in the visual spectrum, acting as binoculars.

Low Level Audio: This unit detects sounds too faint for the human ear.

Communications-

Standard frequency Radio: A single channel radio unit, for inter-robot and robot/human communication.

Multi-frequency radio: A multi channel radio for inter-robot and robot/human communication.

Counter ECM: Equipment to counter jamming of radio communications.

Televisual Camera: A unit for the transmission of information from the robot's visual sensors to a reception unit elsewhere.

Voder/Vocorder: A device for the conversion of speech to electronic impulses which a robot can understand and vice-versa. This permits robots and humans to converse.

Remote control unit: This equipment comes in two parts, the "master" unit and a "slave" unit. This equipment permits a robot engaged in a hazardous occupation (fire-fighting or military activities) at a reduced risk to the robot's brain. This arrangement requires at least two chassis and two or more power plants. cont. on p 11

COMPONENTS TABLE: Part I

ITEM:	MASS (kg) (ammo not incl.):	POWER REQUIREMENTS:	COST (1000 Cr):
Armaments:			
Body/Snub Pistol, modified	1	1	.7
Auto-Pistol, modified	2	1	.7
SMG, modified	5	1	.8
Auto-Rifle, modified	5	2	1.5
Laser Carbine, modified	8	5	3
PGMP-12, modified	10*	10	11
PGMP-13, modified	18*	10	70
PGMP-14, modified	27*	15	325
FGMP-14, modified	12*	10	125
FGMP-15, modifed	30*	15	450
LAG, modified	4	3	820
Lt MG, modified	60	2	1.4
Auto Grenade Launcher, modified	7	2	1
RAM Grenade Launcher, modified	7	2	1
**These weapons may only be installed on chassis types VI and VII.*			
Sensors:			
Basic Sensor Package	2	1	.2
Enhanced Night Vision	1	1	.2
Passive IR	1	1	.2
Active IR	2	2	.3
Passive Ultra-Violet	1	1	.2
Active Ultra-Violet	2	2	.3
Subsonic Audio	1	1	.2
Ultrasonic Audio	1	1	.2
Telescopic Visual	2	1	.2
Low level Audio	1	1	.2
Communications:			
Standard Freq Radio	1	1	.1
Multi-Freg Radio	1	1	.2
Counter ECM package	2	2	.3
Televisual Camera	3	4	.2
Voder/Vocorder	1	2	.2
Remote "Master" unit	2	3	.4
Remote "Slave" unit	2	2	.2
Work Arms:			
Light	10	2	.5
Medium	20	5	.7
Heavy	50	10	1
Work arms may support up to two times their mass in installed components.			

COMPONENTS TABLE: Part II

Chassis:

Type:	Total Unit Mass (kg):	Chassis Mass (kg):	Cost (100 Cr)
I	50	5	75
II	75	8	95
III	100	10	10
IV	200	20	20
V	400	40	30
VI	1000	100	40
VII	2000	200	50

Power Plants:

Type:	Power Output:	Mass (kg):	Cost (1000 Cr):
A	10	20	.6
B	20	30	.8
C	30	70	1
D	40	150	1.2
E	50	300	1.4
F	70	400	1.5
G	90	500	2

Mass includes fuel for 30 days operation.

Locomotory Apparatus:

Wheels

Chassis Type:	Mass (kg):	Power Requirement:	Cost (1000 Cr):
I	7.5	4	.4
II	12	7	.5
III	15	9	.5
IV	30	16	.6
V	60	30	.7
VI	150	75	.8
VII	300	140	1

Tracks

I	10	5	.5
II	15	8	.6
III	20	10	.8
IV	40	20	1
V	80	40	1.2
VI	200	80	1.4
VII	400	150	1.6

COMPONENTS TABLE: Part III

Locomotory Apparatus (cont.):

Chassis Type:	Mass (kg):	Power Requirement:	Cost (1000 Cr):
	Legs		
I	15	8	.6
II	23	12	.8
III	30	20	1
IV	60	28	1.2
V	120	60	1.4
VI	300	90	1.6
VII	600	200	2
	Anti-Gravity Units		
I	6	10	1
II	10	15	1.5
III	12	25	1.75
IV	25	35	2
V	50	75	2.2
VI	120	100	2.4
VII	250	250	2.5

Brains:

Tech Level:	Programming Capacity:	Mass (kg):	Cost (1000 Cr):
12	2	8	100
14	3	6	500
15	5	4	1000
16	7	3	2000

Armament-

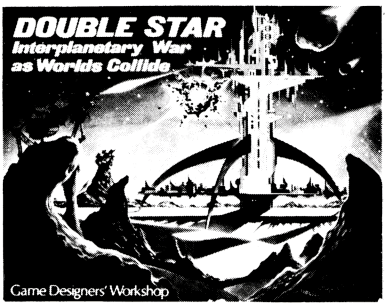
The weapons listed in the components table represent versions specially modified for use in robots. The weapons include provision for increased ammunition supply, ventilation and cooling where needed and links to sensors for aiming and firing the weapon. If a robot is equipped with the proper manipulative appendages, it may reload itself also. Normal visual sensors are adequate for aiming and firing, but enhancement may be desireable in some conditions.

Example of Construction:

Security Robot - This robot incorporates chassis type II, allowing installation of up to 75 kg of equipment. We choose a TL 12 brain, wheels, a Lt work arm, a Basic Sensor package augmented by Enhanced Night Vision and Low Level Audio sensors. We pick a Standard Freq. Radio for communication.

This equipment needs 14 points of power, requiring at least a type B power plant. Totalling the mass of the components chosen gives us a mass of 74 kg, just under the maximum that the chassis can carry. Totaling the costs of the individual components gives a cost of Cr 111900.

Next issue, we will deal with programming robots for specific jobs, and give a number of rules on how they may be used in a Traveller campaign.



BACKGROUND

The vicious wars depicted by the standard Double Star scenarios accomplished little except to send both cultures reeling back a hundred years in development, while hopelessly embittering them. A century later, both sides had clawed and scratched back to their ante-bellum levels. Use the standard population and industry totals. However, LU had been smashed into aesteroids and the islamic civilization had constructed an immense solar power converter/power complex in orbit around An-Nur to replace the energy resources lost before.

An informant in the Islamic Council of Elders has notified his Chinese superiors of three courses of action considered, but he could not ascertain the final decision. The Islamic player secretly picks one of the three options; he does not reveal it until the game is over. The Islamic player may hold off board any of his forces to aid in the deception.

THE SCENARIO

The Chinese player has the same forces, regardless of which option the Islamic player chooses. He initially has 160 budget points and 20 subsequent production points. At least one-third of his population and one industry must be on I or Chien. The points listed under each option are for the Islamic player. The Islamic player moves first, and sets up after the Chinese player.

THE OPTIONS

Jihad-

The Council has decreed that the infidels must be reduced to a level where they are no longer a threat.

Initial production budget is 220 points, subsequent production budget is 10 points. Islamic player has the *Solar Flare Trigger* (see below).

Game Length: 40 turns.

Victory: The Islamic player's victory conditions are as in the Armageddon scenario. The Chinese player wins if the Islamic player does not achieve at least a tactical victory.

First Strike-

The Elders have decided that a crippling first strike will place them in an acceptable bargaining position.

Initial production budget is 200 points, no subsequent production.

Game Length: 30 turns.

Victory: The Islamic player wins by destroying 300 million Chinese and one Industry counter. If he does not do so, or if he loses 100 million of his own people or an industry counter, then he loses.

VARIANT

Annexation-

The moderates prevailed. Capturing the valuable asteroids was deemed the

best course of action open to them.

Initial production budget is 170 points, no subsequent production.

Game Length: 20 turns.

Victory: The Islamic player must seize control of the asteroids by establishing at least one base on any asteroid group, while maintaining the asteroids free of Chinese bases. The Chinese win by preventing this.

SPECIAL RULES

Asteroids: There are five groups of asteroids in the orbit Lu used to occupy. The five groups are named Sung (conflict), P'i (retrogression), Po (collapse), Wu-Wang (innocence), and Tun (retreat). They are placed by the Islamic player at the beginning of the game in any five contiguous hexes along Lu's orbit. They move the same as Lu would. They may be wrested out of orbit and used just like a planetoid. Each group may hold one base with five population points. Bases on the asteroids may be destroyed in the usual manner by surface strikes. Up to three planetary defenses may be placed in one group, but there must be a base in the group. Orbital fighters may operate from an asteroid group with a base and may engage anywhere in the hex occupied by the group. Ships may engage in combat in hexes containing asteroids, but may not use formations.

Solar Power Converter/Transmitter: It is considered to be between Al-Razzak's orbit and the Islamic sun An-Nur. Treat it as moving with the world Al-Razzak; there is no counter for it. It is not affected by attacks on Al-Razzak, nor may it be protected by planetary defenses or orbital fighters based on that world. It may be destroyed by using the surface strike table, but of course, no Chinese space-borne forces may be in the hex. Treat it as an industrial target. It has the firepower of a planetary defense installation. Destruction of it counts as the destruction of the first Islamic Industry. If an actual industry is destroyed, the complex does not count, as the Islamic player has sufficient planet based energy to supply two industries.

Solar Flare Trigger: The crowning achievement of Islamic technology, this weapon will agitate the already unstable Chin to emit extremely long solar flares. The Islamic player secretly denotes one transport or fighting transport as carrying the device. It may carry nothing else. If the transport is in the orbit of I and Chin, at the end of the interim phase, after world movement, he may attempt to trigger a solar flare. Orbital fighters from I and Chin cannot reach the triggering orbit.

The Islamic player picks a target hex, and imagines a straight line from the center of the target hex to Chin. This is the line of fire of the flare. Then, on the Solar Flare chart, He cross-indexes the range to the target and his die roll. The resulting number is the number of hexes the flare travels from Chin up the line of fire. Any hex the line of fire travels through, or any hex with a hexside traversed lengthwise by the flare, is effected. Any ships in these hexes, including the triggering transport if it was foolish enough to aim at itself, is destroyed. Any world or planetoid caught in the effected hexes is destroyed.

New Formations: Not all advances were technological. Both sides had devised new tactics. The two following formations are employed just like the standard ones, except the crescent may be used only by the Islamic player and the scorpion only by the Chinese player. Players will have to devise their own counters for these formations.

The Crescent: Ships attack using the sum of all attack factors present.

Each ship defends with its defense factor. Enemy ships may not withdraw. No minimum number of ships, but a crescent formation must have at least three more ships than its target formation or it automatically becomes scattered. This formation does not screen ships.

The Scorpion: Ships attack using the sum of all attack factors present. Each ship defends with its defense factor. The Islamic player secretly notes before each round of attacks whether or not he is in prevent mode. This is in addition to any formation he is in. If the opposing Chinese force uses the scorpion and the Islamic forces are in prevent mode, the Islamic forces get a free first fire. If the Chinese are not using the scorpion and the Islamic forces are in prevent mode, the chinese force may change to any formation except the scorpion. The Islamic player may not change formation. If the Chinese force uses the Scorpion and and the Islamic force is not in the prevent mode, then the Chinese may attack any screened ships, even CC ships. A scorpion formation must contain at least six ships or it will automatically scatter. This formation does not screen ships.

Roberto Camino

SOLAR FLARE CHART

Die Roll:	*Target Range*			
	1	*2*	*3*	*4*
1	1	2	3	4
2	1	2	2	3
3	1	1	1	-
4	1	-	-	-
5	-	-	-	-
6	-	-	-	-

The number given is the actual range. A dash indicates a dud flare, no effect.

The mineral resources of the universe are perhaps most available in the asteroid belts scattered throughout known space. As the shattered remnants of worlds, they lay open the inner cores which are so inaccessible on ordinary planets. Mining these belts however, depends on locating specific chunks of valuable ore and then keeping tabs on them while reports are made, mining crews gathered, and finally exploitation begun. This entire procedure takes experience and lots of money. But the prospecting, the very first step in the process, can be performed by almost anyone. And the big mining companies encourage independent prospecting, because it minimizes their own risk, and helps keep the overhead down.

Prospecting involves actively moving through an asteroid belt, locating likely looking chunks, investigating them, and (if one looks promising) staking a claim. Generally, that claim is then sold to a mining company which exploits it, either by establishing a mine, or by moving the chunk physically to a world or to an orbital factory. Sounds simple, doesn't it. Well, it isn't.

Asteroids come in three general types— *frozen gas, rocky chunks,* and *metal chunks.*

Frozen gas asteroids consist of organic materials (carbon-based) and water. They are useful to colonies, especially orbital or Lagrange point settlements, but they are easy to find, and of generally low value. Prospecting them gives a very low return.

Rocky chunks have almost nothing to recommend them. Formed of common elements, they are ubiquitous, and each seems to be the same as the next. Companies rarely need them, and they don't even serve well as large starship hulls (they're too fragile).

That leaves metal chunks. They are also very common, and that very availability makes them practically worthless. They do serve as good starship hulls, and metal mining companies constantly use nickel-iron asteroids as a source of metal. But such asteroids are free for the taking, and no one will pay for a claim on one when they could go out and easily stake a claim themselves.

If you look closely, you'll see there is nothing left to prospect. And that's where prospecting comes in— prospectors go back over metal chunks, and even rocky chunks, looking for things that are hard to find, or that have been missed in earlier examinations; such things as rare metals, rare elements, unusual configurations, and even artifacts. This sort of prospecting is difficult, often unrewarding, and chancy. Prospectors find little to help them in their search; rarely can the external appearance of a chunk or a normal sensor scan reveal enough to show the presence of value. Prospectors must go out onto the chunk, take samples, look long and hard, and generally spend a lot of time just looking.

PROSPECTING

The procedure detailed on the following pages covers the process of prospecting in an asteroid belt. It consists of two parts: getting started, and actually prospecting. Page 16 covers the process of getting a license to prospect. Page 17 covers the process of looking for valuable materials.

Each box in the flowchart contains a brief description of the current situation, indications of applicable skills, and suggested throws for each of the available next steps. Each box represents one week of time spent in the process.

Pages 18 through 23 cover the specific rules covering the procedure.

8+

APPLY FOR LICENSE *(Admin, Leader)*

7−

6–9 10+

OFFER BRIBE *(Bribery)*

5−

LICENSE GRANTED FOR ASTEROID MINING

3− 4–6

APPLICATION DENIED *(Prospecting)* 7

10+ 8–9

8+ 6–7

CONSIDER BRIBE

5− *(Bribery)*

9+

MAKE SPECIAL APPLICATION *(Administration)*

8−

4− 5–8

SEEK PATRON *(Liaison, Carousing)*

9+

10+

PATRON ASSISTS IN VENTURE *(Leader)*

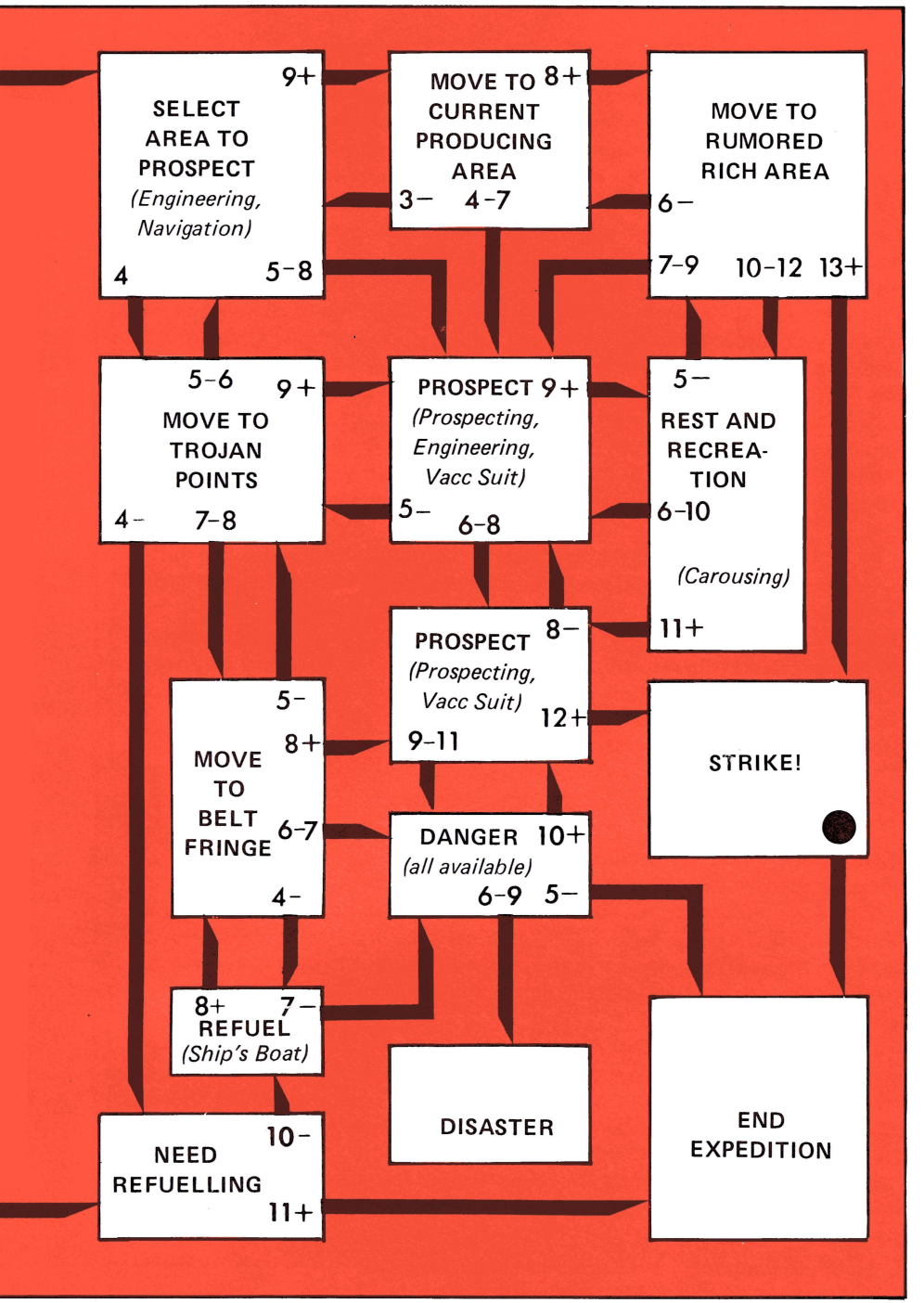
9−

5−

DECIDE TO PROSPECT WITHOUT A LICENSE *(Prospecting)*

6+

DECIDE TO PROSPECT IN BELT FRINGE


SELECT AREA TO PROSPECT
(Engineering, Navigation)
9+
4
5-8
MOVE TO CURRENT PRODUCING AREA
8+
3-
4-7
MOVE TO RUMORED RICH AREA
6-
7-9
10-12
13+
MOVE TO TROJAN POINTS
5-6
9+
4-
7-8
PROSPECT
9+
(Prospecting, Engineering, Vacc Suit)
5-
6-8
REST AND RECREA-TION
5-
6-10
(Carousing)
11+
PROSPECT
8-
(Prospecting, Vacc Suit)
12+
9-11
STRIKE!
MOVE TO BELT FRINGE
5-
8+
6-7
4-
DANGER
10+
(all available)
6-9
5-
REFUEL
(Ship's Boat)
8+
7-
NEED REFUELLING
10-
11+
DISASTER
END EXPEDITION

1. PROCEDURE

The flowchart on pages 16 and 17 details a process for prospecting in an asteroid belt by Traveller adventurers. Each block on the flowchart contains a description of the action, indications as to applicable skills, and suggested die rolls for each possible succeeding action. The referee may apply the throws as indicated, or may ask for input from the players as to what they desire to do. Applicable skills should be used as DMs (DM equal to the skill level available); if more than one character has the same skill, only the highest skill level should be used, but all available skills should be considered. For example, if Admin and Leader are noted as applicable skills, and one player has Leader-3 while another has Leader-1 and Admin-1, then the DM allowed should be +4 (counting Leader-3 and Admin-1). Skill DMs are always plus. If desired, a band of adventurers may always elect to take a DM of -4 in lieu of all other DMs (this may sometimes provide an advantage).

In all cases, the referee may move characters through the flowchart without regard to the flowchart if that would provide a more realistic procedure.

Each block represents the passage of one week's time, and the consequent expenditure of one week's provisions and one week's fuel.

When beginning, the expedition must be outfitted with a ship and sufficient provisions for the duration (see card no. 2). After such preparation, the referee should consult the first block on the flowchart, labelled "Apply for License." The application should cost from Cr1,000 to Cr6,000, probably without a refund if the license is not granted.

After the license application, the situation should flow through various blocks as determined by die rolls and skill DMs.

2. FITTING OUT

The decision to set out on a prospecting expedition must be based on a basic capability, which depends on the group having a ship, and enough capital to supply food, air, and fuel for a period of time.

The Ship: Any type of ship may be used for prospecting, including a yacht, a research ship, even a military ship. In general, it must have stateroom space for the prospecting crew, a maneuver drive capable of 1G, and enough storage space for food and other supplies for the duration of the prospecting period.

Supplies: In general, each person in the expedition requires 1 kilogram of canned or packaged food and other essentials per day, costing an average of Cr25 per kilogram. One ton of such supplies in the cargo area will support 2000 person/days at a cost of Cr50,000. That translates to 285 person/weeks at a cost of Cr175 per week.

Overhead: When outfitting, the crew should probably invest in a safety inspection to uncover any basic problems (Cr500), and in any repairs called for by that inspection. A complete recharge of the ship's oxygen system (Cr1000), and water system (Cr500) is also a good step.

3. BRIBERY

When a license is not issued, some individuals may decide to offer a bribe to the clerk at the license office in hopes of getting it issued. Such a bribe will usually be Cr1,000, with each additional Cr1,000 gaining a DM of +1 on the die roll for success on the bribe.

Note that the flowchart provides two blocks concerned with bribery: one where a week is spent considering the bribe, sizing up the situation, and generally getting ready, and then one where the bribe is actually made. Results include a rebuff, a license granted, or a reapplication allowed.

4. SPECIAL APPLICATION

A denied application may be appealed to a higher level in the local bureaucracy, especially if the characters feel that their original application was unjustly denied, or if a patron intercedes on their behalf.

Special applications will cost from Cr1,000 to Cr6,000, and basically constitute a re-application for a license to prospect.

5. PATRONS

Prospective prospectors may be well-served to find a patron who will help in the process of obtaining a license. Such individuals often make their living performing such services; they take a percentage of the final profit in return for managing the license application.

The patron percentage averages 10% (and may range from 7% to 12%). Further costs for the license are born by the patron (who probably knows how to obtain them cheaper as well). If a bribe is called for, the patron will spend Cr2,000 for the bribe, gaining a DM of +1.

It is possible that a license is unobtainable, in which case, the patron will so state, although he will remain in the deal for his percentage.

It is also possible that the application process, even with a patron, will again arrive at the seek patron box. In such a case, no new patron is found, but the characters may cut the patron out of the deal and proceed to the "Decide to Prospect Without a License" box. The referee may decide whether the parting is amicable or not.

6. UNLICENSED PROSPECTING

Until prospectors are established and well-known, there is the chance that their license will be checked. Thus, the safest method of unlicensed prospecting is in the very fringe of the belt. The fringe is a more dangerous area, while at the same time, it has a marginally greater potential.

Any group beginning a prospecting expedition without a license finds that it must begin in the fringe.

7. PROSPECTING AREAS

There are four areas from which prospecting may begin. They all border on each other, and often a group will begin in one area, start prospecting, and end up in another area. These four areas are:

The Current Producing Area: This area (situated within the main body of the belt) is where most prospectors are currently operating. With some work, there is a reasonable chance that a strike can eventually be achieved.

The Trojan Points: This area is beyond the main body of the belt, situated at the Lagrangian points of the system's gas giant (or solid giant, if no gas giant is present). It too has an average potential of an eventual strike.

The Rumored Rich Area: Contact with other prospectors will eventually produce rumors as to the rich areas in the belt. This area is one such area. It has the greatest potential of an immediate strike, but only to experienced prospectors. Any expedition with at least prospecting-1 is allowed a DM of +1 on the suggested throw; the DM should be +1 regardless of the actual level of prospecting skill present.

The Belt Fringe: This area is the most dangerous, but it also has the most potential, after the rumored rich area. The fringe is the area entered by unlicensed prospectors, after which they tend to move into the other areas of the belt.

All beginning areas lead to boxes labelled 'Prospect," as well as to other beginning areas. Prospect boxes are the key to making a strike, and the key to gaining prospecting skill. Of the two prospect boxes, the second is adjacent to the strike box; it is also the more dangerous, as it is adjacent to the danger box (see card no. 9).

For the first 26 weeks spent in prospect boxes, each member of the expedition receives prospecting-1. For each additional 39 weeks spent in prospect boxes, each member receives his or her choice of an increase of 1 in prospecting or in vacc suit.

8. REFUELLING

Any ship can be assumed to be fully fuelled (more or less) when the expedition begins. That fuel will last up to 39 weeks (for maneuver drive use in system, as well as life support and overhead).

Characters in an expedition are, of course, responsible for bookkeeping and making sure that their fuel level remains adequate. When necessary, they should move toward the refuelling box and refill their tanks.

Refuelling at the "Refuel" box indicates the refilling of the ship's tanks at the local gas giant, and will allow 39 more weeks of maneuver. If the system has no gas giant, then refuelling may require the purchase of fuel at a starport, or selection of a frozen gas asteroid.

At times, however, the procedure will move the ship to the "Refuelling" box (or to the "Needs Refuelling" box) as an indication that unusual maneuvers have drained the tanks, or that someone was not paying attention to fuel conservation procedures.

9. DANGER

Expeditions in the belt fringe, in the process of refuelling, or in the second prospecting box, may find themselves forced to the "Danger" box. This situation indicates the immediate possibility of disaster (covered fully in card no. 10).

DMs available when in the danger box are listed to the right. The highest level of each skill may be counted, but each skill type may only be considered once. In lieu of the skill DMs, the voluntary DM of -4 may be chosen instead, although this may well force an end to the expedition.

- Engineering
- Navigation
- Prospecting
- Ship's Boat
- Vacc Suit

10. DISASTER

When disaster strikes, the expedition is subjected to an irreparable situation, and (if the individuals survive) it must call for assistance.

Personal Survival: Each individual must throw for personal survival. The suggested throw is constitution, modified by DMs for prospecting, vacc suit, and any other deep space skills which seem applicable. If the throw is failed, the individual has died.

Expedition Rescue: The expedition itself must call for help, and will be rescued by elements of the local government rescue operation. However, a lien will be placed on the ship (for from 7% to 12% of the ship's current value) until rescue costs are paid.

Unlicensed Prospecting: If the expedition is found to be prospecting without a license, the ship and all supplies aboard will be confiscated.

11. STRIKE!

If a strike is made, then the expedition will have encountered some form of valuable material, and may immediately proceed to end the expedition and convert it to cash. Four strike types are listed below, with suggested throws indicated to determine the specific type included in the description:

Rare Metals (throw 2-6): Including gold, silver, titanium, cobalt, platinum, or iridium.

Special Materials (throw 7-9): Including gemstones, rare earths, radioactives, and even fossils of interest to the scientific community.

Artifacts (throw 10): An asteroid has been found with artifacts from an alien civilization. The referee determines the nature of such materials, and their value. Characters may elect to retain the artifacts, or to sell them.

Salvage (throw 11-12): With danger everpresent in the belt, many ships are lost in the belt; finding one makes salvage operations possible. This result indicates that one such ship has been found; the characters may rehabilitate the ship and turn it to their own purposes, or they may return it to the starport and sell it for salvage (getting perhaps 50% to 75% of its sale price, the remainder going for court and bureaucratic expenses).

12. SELLING OFF STRIKES

Upon ending an expedition, a strike may be sold to the highest bidder. In the case of rare metals or special materials, mining companies will bid on a decaying basis, as explained below. Artifacts and salvage must be administered by the referee.

Decaying Bids: When a strike is made, the ship's computer retains sensor tapes of the materials or metals, and of the asteroid's orbital data. This information, in tape form, is what is presented to the mining company. The expedition members may go to some or all of the three mining companies in the belt, and ask for bids. Because they are jealous rivals, each will bid, but will reduce the offer for each additional bid that the expedition seeks.

A mining company bid is made by rolling two dice, preferably of two colors, such as red and white. The white die is the exponent of 10, while the red die is the multiplier of that figure. Thus, a white die oll of 1 indicates 10, while a white die roll of 6 indicates 1,000,000. A red die roll of 1 means that the white die roll is multiplied by 1, while a red die roll of 6 indicates that the white die roll is multiplied by 6. Possible bids range from Cr10 to Cr6,000,000.

A bid is reduced on the exponent die (for example, a bid of 6,000,000 would reduce to 600,000) if a mining company reduces its bid because other bids are sought. The exponent is reduced by one for each additional bid sought.

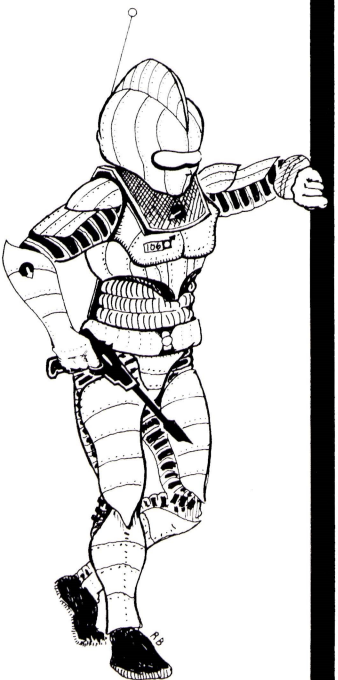
Mining Companies are honest, or they would have trouble staying in business. Payment on a claim sold to them is made by a post-dated note payable in two weeks. In that time, they verify the claim to be as specified; if not, the note is stopped at the bank before it becomes due.

Unlicensed Prospecting: Mining companies will automatically reduce any bid on a claim by 1 on the exponent die if it is offered by an unlicensed expedition.

Artifacts: Artifacts may be sold off using the same procedure as mining company bids. In this case, however, the bids are made by local, subsector, and imperial agents. The referee should monitor these bids to insure that they are in line with the true value of the artifacts which have been discovered. It may prove prudent for bids to be lowered if the artifacts are investigated to the point of damage prior to offering them for sale.

13. END EXPEDITION

Arrival at this box marks the end of the current prospecting expedition. To continue prospecting, the expedition must re-outfit, and must obtain a new license, beginning a new cycle through the procedure.



ADVANCED POWERED BATTLE ARMOR

by Bob Barger

ADVANCED Powered Battle Armor (APBA) is special issue for Imperial Marines on high gravity assignments. Fully charged with power and life support, it will sustain missions of up to eight hours duration. While many weapons and electronic gear are options, infrared snoopers and basic tactical communicators are standard. The basic suit weapon, the hand flamer, is useful for 100 combat rounds, fed from a flame fuel tank on the suit's back.

Price: not available on the open market. *Tech level:* 14.

ADVANCED Powered Battle Armor triples the personal strength of its wearer for activity. Dexterity remains unaffected; endurance restrictions are eliminated. Wounding and death are based on the enhanced strength and normal dexterity and endurance values (removing the suit converts hits against strength to one-third point per hit point against strength).

APBA enhances speed of its wearer, increasing it to eight bands per combat round (Book 1, page 29), or to the dexterity of the wearer, whichever is less. Drug enhanced speed has no further effect. Some limited flight (actually very strong powered jumps) is possible at the referee's discretion.

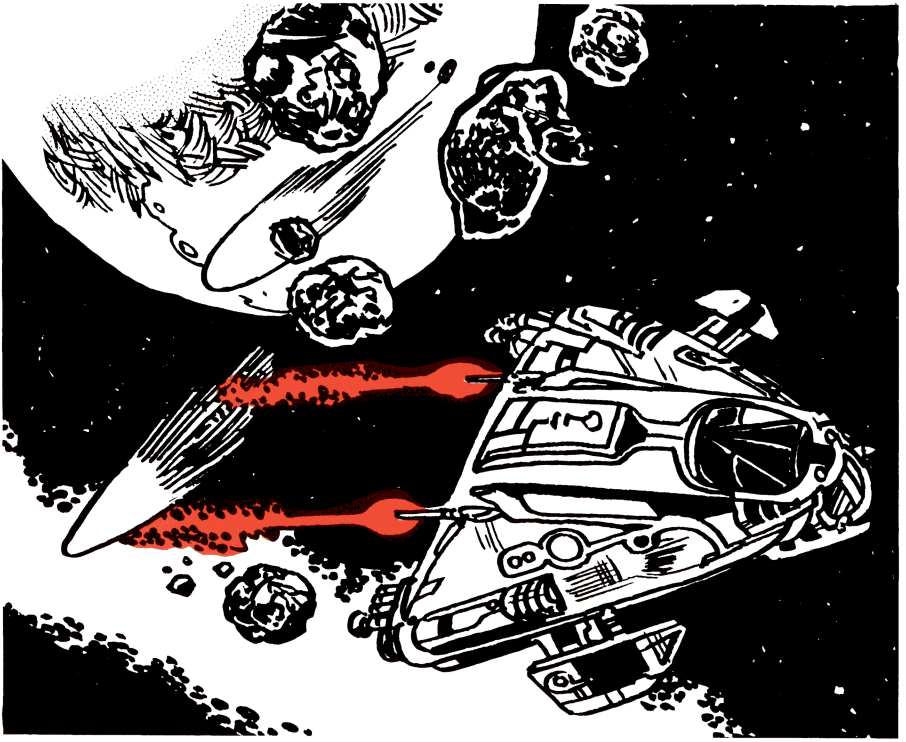
Battle Dress-1 or Vacc Suit-2 is required to use APBA. Skill level of less than that stated requires a DM of -2 for any action requiring dexterity. Levels above the minimum allow DM +1 per level in excess of that stated.

THE hand flamer built into the right glove of the suit can be fired twice per combat round (it doesn't need much aiming), inflicting 4D damage per hit. DM's against targets to hit: Nothing– +7, Jack– +5, Mesh– +4, Cloth– +3, Reflec– +2, Ablat– +1, Battle– 0. DM's for range: Close– +4, Short– +2, Medium– +1, Long– No.

APBA itself is treated as battle dress +1 when a target. However, the flame fuel tank on the suit back is an Achilles Heel: every time the suit sustains a gun hit, roll 11+ for the tank to explode, disabling the suit, and inflicting 6D hits on the wearer. This does not apply if the flame fuel tank is empty.

Putting on APBA is a lengthy process, requiring at least ten minutes. Taking off APBA is easier, taking only about three minutes.

– Bob Barger



Players' Information:

P-4836 is a small planetoid in the belt of the Rabwhar system (planetary characteristics: C000219C). The planetoid is owned by Sternmetal Horizons, LIC, which uses it for top secret experimental purposes.

The players are approached by a representative of an unnamed firm which wishes to retain a small group of people for a descrete mission. Sternmetal and several other megacorporations have bid on an Imperial contract which will be worth billions of credits to the winner. Sternmetal is rumoured to have developed a new and innovative manufacturing process which will enable them to reduce costs by 5 - 7% per unit. This may seem small, but it will mean a savings of several million credits in the long run, and will enable Sternmetal to submit the lowest bid. The precess was developed on P-4836 and the patron has determined that, for security reasons, its details are being kept there, stored in the experimental stations computer. The patron offers Cr 1000000 if the players can penetrate the defenses of P-4836, copy the details of the manufacturing process, and turn the information over to him, without being discovered.

Amber Zone

Referee's information:

The patron provides the following additional information upon acceptance of the mission.

The starport at P-4836 is of a size equivalent to a C class starport, but with the difference that refined fuel is available. It is a private installation, and unauthorized ships are not permitted to land. Outside vessels (those not owned by Sternmetal) sometimes dock at P-4836, carrying supplies and new

personnel for the station, but the crews are not permitted to enter the station proper, and rigorous security checks are carried out upon any employee entering or leaving the station (obviously, the unnamed firm has been unable to suborn a Sternmetal employee, or they wouldn't need to hire the players).

Imperial regulations require all but purely military spaceports to permit ships in distress to dock.

The experimental station has a staff of 189, of which 126 are Sternmetal researchers, 34 operate the starport and its facilities, and 29 are security personnel. These last are organized as follows:

Security Platoon:

Chief of Security - Acts as platoon leader, armed with automatic pistol, and ballistic cloth armor.

Assistant Chief of Security - Acts as assistant platoon leader, armed with automatic pistol and cloth.

First squad: This consists of a squad leader (sergeant) and two fire teams, (1 corporal and 3 privates). Each of these are equipped with a gaus rifle and cloth armor.

Second Squad: Same as first squad.

Third Squad: Same as first squad.

Each squad is on duty for 8 hours and off duty for 16. One fire team of the two on duty at any given moment are in battle dress. During security alerts and inspections, the whole security platoon is called to duty.

In addition to the regular staff, the station maintains several spaceships for the defense of the station and for escort of visiting bigwigs. The precise nature of these is left up to the referee to determine, depending upon the size of the adventurers party and the type of ship they enter system with. The players should have a clue to the number and type of ships present, but they should not have complete knowledge of them.

Once having penetrated the defenses of the station, the players locate the stations main computer and extract the desired information from it. The patron can provide enough information for a character with computer expertise to know what to look for, and to have a chance to circumvent the computers security programming. The base chance of the computer alerting the security force should be determined by the referee, with appropiate DM's added or subtracted for computer skill or lack of it.

If the players seem to be having too easy a time of it, the referee should implement one or two unexpected variables, such as a surprise inspection by high officials of sternmetal, a security alert or another team, hired by a second unnamed firm. The referee should also decide at the outset whether or not the information is in the computer to begin with. The patron, of course, will not pay if he does not receive the data.

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The Bestiary

Beaked Monkey
or
Beaker
(Psittarhynchus fructophagii)

Beakers (as they are sometimes called) are common on many worlds, both in the wild and in captivity. In addition, they are found on many starships as pets. Their planet of origin is not known, but the animals can be documented as far back as far as 300 years pre-Imperial, with a range almost as widespread as at the present.

Beaked monkeys typically weigh from 2 to 3 kilograms, and measure 60 to 75 cm in length, half of which is generally taken up by the tail. Tails are sometimes bobbed on animals kept aboard spacecraft. Beakers are covered by a short fur, most commonly brown or gray. Black is rare, and white extremely so (roll 2D for 2-7 = brown, 8-10 = grey, 11 = black and 12 = white).

The skeleton and musculature follow typical terran vertebrate norms. Respiration is accomplished by the usual paired lung arrangement, the circulatory system is closed and the heart four-chambered, making the animal very similar to certain small terran mammals such as the squirrel monkey.

The animal's most notable feature, the beak, is formed of two bony projections from the palate and mandible, covered by a horny substance resembling keratin. The lower third of the esophagus is extremely heavily muscled and lined with a number of toothlike grinding structures, which break swallowed food into fragments small enough to be digested readily. In the wild, the beaker is arborial, and is thought to have originally subsisted on a diet of hard-shelled nuts and seeds, although specimens have been observed eating insects and other small animals. In captivity, beakers thrive on almost

any available type of human food.

The animals are quite popular as pets on starships because of their gregarious affection to almost all humans, their intelligence and their scrupulous cleanliness. Some individuals are rumored to act as a booster for certain psionic activities, but this last ability has not been proven to the satisfaction of most authorities.

Referee's Information: Certain animals act as boosters for psionic talents under restricted conditions. These are:

★ The animal must have the potential. (roll 2D for 10+ to determine if a particular beaker has psionic booster potential, DMs +1 if black, +2 if white). A player with psionic ability at any level greater than 0 may be able to detect a beaker with psionic enhancement potential. Roll 2D for 8+, DM of +1 for each level of psionic rating. No player can determine the amount a particular beaker will be able to boost psi potential in advance.

★ The beaker must have lived in close proximity with the human desiring the boost for at least three months.

★ The beaker and the human must be within one meter of each other during the time the boost is taking place. If this distance is exceeded, throw 2D for 4+ for the beaker to die. Roll once each combat round the separation continues.

★ The human desiring the boost must have a natural, unenhanced psi rating of 5 or higher.

If all of these conditions are met, the beaker will raise the human's psi rating temporarily by from one to six points (roll one die). Each time the player's psi strength is boosted, roll 2D for 9+ for the beaker to die from the effort. If a beaker dies during psi contact with a human, that human permanently loses 2 from his psionic strength rating. Note that this does not happen except when the beaker is used as a psi booster.

Sea Bear
(Pseudoarctos ansonii, et al)

Sea Bears are native to Thengo, a planet in the Chronor subsector, but seem to have been used in pre-imperial colonization projects in the Jewell, Lianic and Massina subsectors, and are therefore not uncommon on many planets in these regions.

Adults are typically 1 to 1.2 meters in length, and weigh from 20 to 25 kg. The skeleton is calciferous, internal, and generally resembles that of a terran vertebrate, except in the number of limbs and in the framing of the body cavity. The spinal column runs from the base of the skull dorsally along the body until it reaches the pelvis. In place of ribs, the sea bear's body cavity is supported by short lengths of bone joined in what some have described as geodesic fashion, i.e., as a series of mutually interconnected triangles. This arrangement is very sturdy, and provides an excellent protection to the internal organs of the sea bear.

Externally, the most notable feature of the sea bear is the number of limbs. Oddly enough for an animal of its size, the sea bear has four pairs of limbs, one posterior locomotory pair, one anterior pair used in defense and food acqui-

sition, and two medial pairs which can serve either purpose. The head is typical, a bony cranium to protect the brain, upon which are mounted paired sensory organs, (eyes, nose, ears, and a ventrally located mouth. The nose is located well forward, apparently as an adaptation for breathing while partially submerged.

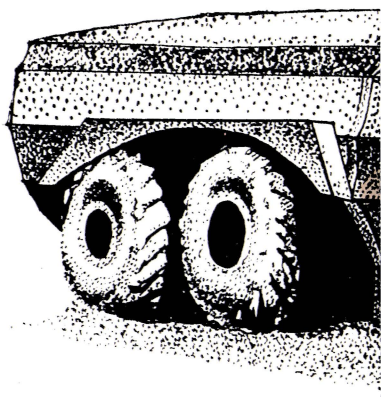
Respiration and circulation are handled by the typical arrangement of paired lungs coupled with a closed circulatory system.

Sea bears are carnivores, and are usually found along seashores and in shallow off-shore areas of large bodies of water. Sea bears are solitary hunters, preying upon small aquatic and semi-aquatic animal life. The sea bear usually hunts by swimming slowly along the surface, and diving upon its prey from above, taking it by surprise.

During the mating season, sea bears will congregate in huge groups, sometimes consisting of hundreds of individuals. These groups settle for several weeks on an island or peninsula protected from dangers to the young, where male and female sea bears engage in a mating ritual not fully documented. Each pair eventually produces one to three young. As soon as the young are able to travel, (usually after six to eight weeks, the group breaks up into family units which care for the young until they are able to fend for themselves (usually after six months). The family units then break up until the next mating season. Some observers have reported scattered instances of sea bears mating for life, and hunting as a team.

Loren Wiseman

The government factor in the Universal planetary profile need not be a number 0-9 or a letter A-F. For example, M could be used to indicate a military government, perhaps a junta or coup.

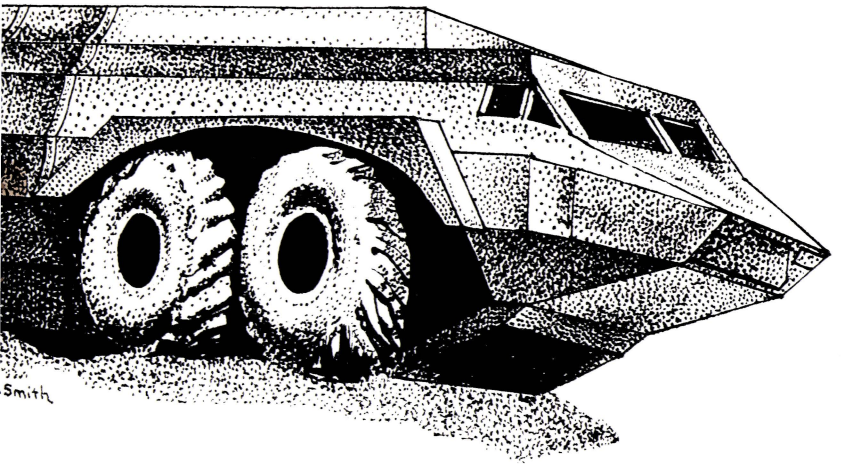


ATV

The All Terrain Vehicle (commonly abbreviated ATV) is a standard type of exploration vehicle carried on a wide variety of starships. The vehicle is fully pressurized and contains complete (though cramped) eating, sleeping, and travel facilities for eight persons. It has controls of a standard type, and is amphibious. It masses ten tons, and costs Cr30,000.

Designed to serve in a wide variety of atmospheres, gravitational levels, and other conditions, the ATV has a range of 5000 km between refuellings. Refuelling is performed from a ship's power plant; the ATV uses an energy storage system to drive individual motors in each wheel. An average ATV is capable of 50 kph over cross-country terrain, and twice that on good roads. Of course, extremely bad terrain, bad weather, large obstructions, or other considerations, may reduce cross country speed further.

THE SHIP'S -LOCKER-



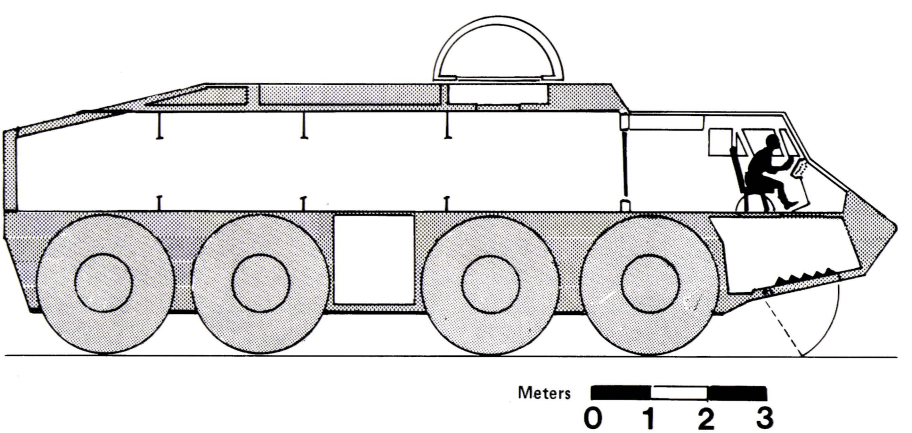
The ATV steers with all eight wheels, making it highly maneuverable; it can circle in less than twice its length. With multi-point turns, it can reverse direction in its own length. All drive and storage mechanisms are below the floor level, giving an uninterrupted deck for quarters and storage.

Unfortunately, All-Terrain is a misnomer for this vehicle. The vehicle cannot traverse certain types of terrain, such as vertical cliffs, or extremely unstable ground. In addition, an ATV is usually not allowed on city streets: its just too big, and makes for traffic congestion.

Access to an ATV depends on purpose. For entrance, the forward ramp or the air lock between the forward and rear wheels may be used. Maintenance is performed through a panel at the rear of the vehicle. emergency access can be achieved through the central dorsal hatch.

The cutaway drawing shows a typical ATV with an optional central dome mounted over the dorsal hatch. This dome can be used for observation, or may be used for the mounting of a heavy weapon, sensors, radar, or commo gear.

The ATV is generally of tech level 7 or 8, and is used even at TL 15 because it is relatively inexpensive, and has proven its worth throughout the Imperium.



MERCENARY CHARACTER GENERATION PROCEDURE OUTLINE

This outline is intended as a guide to the character generation procedures in *Mercenary, Traveller Book 4.* References in this guide are formatted as follows: "B1, 5-10" means *Traveller Book 1,* pages 5 through 10; "Section 5a" refers to this outline, Section 5, subsection a.

1. Generate Characteristics

a. Roll 2D for each of the following: Strength, Dexterity, Endurance, Intelligence, Education, and Social Standing.

b. Determine Technological Level of the world the character is serving on.

2. Enlistment

a. Army: 5+, DM of +1 if Dext 6+, DM of +2 if Endur 5+.

b. Marines: 9+, DM of +1 if Intel 8+, DM of +2 if Stren 8+.

c. If enlistment fails (only one try is permitted) go to Draft (B1, 5&10).

3. Choice of Arm

a. Army: Infantry, Cavalry, Artillery, or Support.

b. Marines: Marine Infantry, or Support.

4. Basic and Advanced Training

a. Basic: Receive one Level-1 Gun Combat skill (select from B1, 12-13).

b. Advanced: roll one Military Occupational Specialty (MOS) skill (see MOS tables, B4, 6). If tech level in Section 1b is is 12+, allow DM of +1.

c. Initial Rank: Private, E1.

5. General Assignment

a. Roll 1D, add DMs for Educ or Officer Rank (see general assignment table, B1, 6).

b. If enlisted rank (ranks E1 through E9), ignore all results but Special and go to Unit Assignment (Section 6).

c. If officer rank (ranks O1 through O9), note Command or Staff results and go to Unit Assignment (Section 6).

d. Regardless of rank, if result is Special, go to Special Assignments (Section 8).

e. If previous assignment was Aide to General Officer, choose General Assignment or Special Assignment without die roll (except not Military Aide/Attache).

6. Unit Assignment

a. Roll 2D and refer to Unit Assignment Table (B4, 6), note result, proceed to Assignment Resolution (Section 7).

7. Assignment Resolution

a. Consult Assignment Resolution Table (B4, 7) and column pertaining to proper service, branch, and unit assignment.

b. Survival: If Survival roll succeeds, proceed to Section 7b. If Survival roll fails, character is deceased. If die roll equals survival number and Unit Assignment is Counter-Insurgency, Raid, or Police Action then receive Purple Heart. Note DMs for MOS skills.

c. Decoration: If Decoration roll succeeds, receive MCUF. If Decoration roll succeeds by 3+, receive MCG instead. If Decoration roll succeeds by 6+, receive SEH instead.

d. Promotion: Note DMs for Educ, Intel, or Endur. If number is in parentheses, officers may not roll. If promotion roll succeeds, increase rank by one (E9+1=O1). Officers may only receive one promotion per term (initial commission does not count as a promotion for this purpose).

e. Skills: If Skill roll succeeds, individual may receive one skill:

e1. Enlisted (rank E1 or E2): roll

on Army/Marine Life (B4, 8) or MOS Table (B4, 6).

e2. Non-commissioned Officers (of ranks E3 through E9): Roll on either Army or Marine Life, MOS, or NCO Skills Tables (B4, 8).

e3. Officers (ranks O1 through O9): If holding command assignment (from Section 5c), roll on either Army or Marine Life, MOS, or Command (B4, 8) Table.

e4. Officers (O1 through O9): if holding Staff Assignment (from 5c), roll on either Army/Marine Life, MOS, or Staff (B4, 8) Table.

e5. If Marine and Unit Assignment is Ship's Troops, then may roll on Shipboard Life Table instead.

f. Assignment Resolution Completed. Return to section 5a and roll another assignment. Note that after every fourth assignment (after three in the first term) proceed to Reenlistment (Section 9).

8. Special Assignments

a. Roll 1D and consult Special Assignment Table (B4, 7), using the Enlisted and NCOs column (if rank is E1 through E9) or Officers column (if rank is O1 through O9). Note DMs for Educ and Endur.

b. If Cross-Training, roll one MOS from any other arm (except Commando). Army may not Cross-Train as Marines. See note in Section 10a.

c. If Protected Forces Training, Recruiting, Specialist School, Intelligence School, Command College, or Staff College, roll for skills as instructed (B4, 5&9).

d. If OCS, roll for skills as instructed (B4, 5). Rank equals O1.

e. If Commando School, roll for skills as instructed (B4, 5) and see notes in Sections 10b and 10c.

f. If Military Attache/Aide, follow instructions (B4, 9). If Aide to General Officer, return to General Assignments, Section 5e.

g. Assignment Resolution completed. Return to Section 5a and roll another assignment. Note that after every fourth assignment (after three in the first term) proceed to Reenlistment (Section 9).

9. Reenlistment

a. Army: Basic throw 7+, DM of +2 if rank is E1 through E9.

b. Marine: Basic throw is 6+, DM of +1 if Cross-Trained in Artillery or Cavalry and intend to transfer to this arm next term (see Section 10a).

c. If Reenlistment roll succeeds, and age is 34+, check Aging Table (B1, 9). Return to Section 5 to begin next term.

d. If Reenlistment roll fails, proceed to Mustering Out (Section 11).

10. Changing Arms of Service

a. If character has Cross-Trained in another arm, upon reenlistment may change to that arm by choice.

b. If character has attended Commando School, upon reenlistment may transfer to Commando arm.

c. Officers may change arms by choice at the beginning of any term (Cross-Training not required), except they may not change to Commandos without having attended Commando School.

d. All changing of Arms of Service is performed only at the beginning of a term.

11. Mustering Out and Aging

a. Use procedures and tables in B1, 9 for Mustering Out and Aging. Retirement pay is indicated in B1. Service skills as described in B1 are not awarded to Mercenary characters.

12. Resumes

a. Procedures for compiling a resume for a finished character are in B4, 9-10.

—Chuck Kallenbach II

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